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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,573	10/13/2004	Gunnar Klinghult	55574-00006USPX	4509
58342 7590 12/27/2007 WARREN A. SKLAR (SOER) RENNER, OTTO, BOISSELLE & SKLAR, LLP 1621 EUCLID AVENUE 19TH FLOOR CLEVELAND, OH 44115			EXAMINER MOON, SEOKYUN	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/511,573

Applicant(s)

KLINGHULT, GUNNAR

Examiner

Seokyun Moon

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9,10,12,15-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9,10,12,15-19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. The Applicants' arguments, see pages 7-8 of the Applicants' Remark, filed on October 4, 2007, with respect to the rejection(s) of claim(s) 20 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 9, 10, 15-18, and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koziuk (US 6,058,485) in view of Ryan (GB 2,279,750).

As to **claim 9**, Koziuk teaches an input device [fig. 1] comprising:

a pointing device that includes a user-manipulable member [fig. 3] having a conductive part ("*resistive layer 28*") covered by a non-conductive cover ("*glass layer 24*");

an activity sensor ("*controller 16*") [fig. 1] for sensing activation of the pointing device [col. 4 lines 28-38];

wherein the activity sensor comprises a detector device ("*34a*", "*34b*", "*34c*", and "*34d*") [fig. 4] for sensing a capacitance change in the pointing device [col. 4 lines 28-38];

wherein the activity sensor (“*controller 16*”) [fig. 1] is capacitively coupled to the conductive part (“*resistive layer 28*”) [fig. 3] of the user-manipulable member by a member (“*shield layer 31*”) disposed with respect to the user-manipulable member [col. 4 lines 17-18].

the detector device detects the capacitance change by measuring magnitude of flowing current [col. 5 lines 4-7]; and

wherein the activity sensor is adapted to enable energization of the pointing device [col. 5 lines 21-24], and the activity sensor further comprises a timer adapted to switch off the energization of the pointing device after a time has elapsed without any sensed activation of the pointing device [col. 7 lines 50-52 and abstract].

Koziuk does not expressly teach the activity sensor comprising a resonant circuit and a detector device detecting the capacitance change by detecting the change in frequency of the resonant circuit.

However, Ryan teaches an idea of using a resonant circuit (a combination of “82”, “83”, and “84”) [fig. 8] and a detector device detecting a capacitance change by detecting the change in frequency of the resonant circuit, as components of an activity sensor of an electronic device [abstract lines 4-6], wherein the resonant circuit has a frequency that changes when a finger of a user approaches or touches an user-manipulable member by establishment of a capacitance change of electrodes of the device [pg 4 lines 10-13 and pg 7 lines 4-7].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the activity sensor of Koziuk to use a resonant circuit and a detector detecting the capacitance change of the circuit by detecting the change in frequency of the resonant circuit, instead of using the current measurement circuits, as a sensing means for capacitance change in the input device, as taught by Ryan, in order to provide an input device including a capacitive proximity sensor having low power consumption and low manufacturing cost [Ryan: pg 1 lines 12-15].

Koziuk ~~as modified above~~ does not teach the activity sensor comprising a threshold comparator.

However, Ryan further teaches an activity sensor comprising a threshold comparator ("*threshold circuit 91*") [fig. 8] connected to receive an output of a detector device and the activity sensor is adapted to enable energization of an electronic device when the sensed activation of the device exceeds a threshold [pg 7 lines 12-15].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the activity sensor of Ryan as modified above to include Ryan's threshold comparator so that the activity sensor of Koziuk as modified above only enables energization of the pointing device when the sensed activation of the pointing device exceeds a threshold, as taught by Ryan, in order to prevent the input device of Koziuk as modified above from being activated from unintended user movement.

As to **claim 10**, Koziuk as modified by Ryan teaches the threshold being adjustable [Ryan: pg 9 lines 4-7].

As to **claim 17**, Koziuk as modified by Ryan teaches the activity sensor comprising a resonant circuit (a combination of "82", "83", and "84"), an oscillator ("85"), and a detector [Ryan: fig. 8].

Koziuk as modified by Ryan does not expressly teach the detector device comprising a high impedance amplifier.

However, since the Applicants have failed to disclose that specifying the activity sensor to comprise a high impedance amplifier instead of an oscillator with a resonant circuit provides an advantage, is used for a particular purpose, or solves a state problem, it is an obvious matter of design choice to indicate the detector device to include a high impedance amplifier [Appl. pg 4 lines 14-15].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any one of a high impedance amplifier or an oscillator with a resonant circuit since any one of them would perform equally well at processing the detected capacitive change.

As to **claim 18**, Koziuk as modified by Ryan teaches the device comprising a display ("*display 26*") [fig. 1] for an input performed by means of the input device.

Koziuk as modified by Ryan does not expressly teach the display to show menus in which navigation is performed by means of the input device.

However, the Examiner takes official notice that it is well known in the art to use a digitizing panel as means to navigate menus on a display of a computer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display of Koziuk as modified by Ryan to shown menus and to use the input device of Koziuk as modified by Ryan as a means for navigating the shown menus, in order to use the device of Koziuk as modified by Ryan in various software applications.

As to **claims 15, 16, 21, and 22**, Koziuk as modified by Ryan teaches the user-manipulable member being a digitizing panel [Koziuk: abstract lines 1-2] and the digitizing panel includes a resistive layer (Koziuk: "28") [Koziuk: fig. 3] as a conductive layer that covers a internal structure of the digitizing panel and the resistive layer is covered by the non-conductive cover (Koziuk: "24").

Koziuk as modified by Ryan further teaches the detector device further comprising an oscillator (Ryan: "85") [Ryan: fig. 8] with the resonant circuit (Ryan: "82", "83", and "84"), wherein a capacitance of the user-manipulable member forms a part of the resonant circuit [Ryan: pg 4 lines 10-13].

Koziuk as modified by Ryan does not teach the user-manipulable member being a ball.

However, since the applicants have failed to provide that specifying the type of the user-manipulable member as a ball provides an advantage, is used for a particular purpose, or solves a state problem, it is an obvious matter of design choice to specify the type of the user-manipulable member as a ball [Appl. pg 2 lines 22-24].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to specify the type of the user-manipulable member as any one of a ball, a jog dial, and a touch panel since any one of the input devices having the claimed activity sensor would perform equally well at controlling the timing of activating the device.

As to **claim 23**, Koziuk as modified by Ryan teaches the member ("*shield layer 31*") [fig. 3] disposed with respect to the user-manipulable member (a combination of "*glass layer 24*" and "*resistive layer 28*") being an antenna or pick-up [col. 4 lines 16-17, receiving an AC signal].

As to **claim 24**, Koziuk as modified by Ryan teaches the member ("*shield layer 31*") [fig. 3] disposed with respect to the user-manipulable member (a combination of "*glass layer 24*" and "*resistive layer 28*") being spaced apart from the non-conductive cover ("*glass layer 24*").

4. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koziuk and Ryan as applied to claims 9, 10, 15-18, and 21-24 above, and further in view of Casebolt (US 6,661,410).

As to **claim 12**, Koziuk as modified by Ryan teaches a timer adapted to switch off the energization of the pointing device (making the device to be in a dormant state) after a time has elapsed [col. 7 lines 50-52 and abstract].

~~Koziuk~~  
~~Ryan~~ as modified by ~~Rapatch~~ <sup>Ryan</sup> does not expressly disclose the time being adjustable.

However, Casebolt [col. 14 lines 25-35] teaches an activity sensor comprising a timer adapted to switch off the energization of a pointing device after a time has elapsed [col. 14 lines 49-51], wherein the time is adjustable [col. 14 lines 58-60 and col. 14 line 67- col. 15 line 2].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the timer of Koziuk as modified by Ryan so that the time period of the timer required to switch off the energization of the pointing device is adjustable, as taught by Casebolt, in order to differentially control the supply of power for signal generation taking into account the relative power consumption rates [col. 14 lines 31-35].

5. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koziuk and Ryan as applied to claims 9, 10, 15-18, and 21-24 above, and further in view of Sokoloff (US 6,567,677)

Koziuk as modified by Ryan teaches the device being a computer [col. 2 lines 61-63].

Koziuk as modified by Ryan does not teach the device being a mobile telephone.

However, Sokoloff [fig. 1c] teaches an idea of using a touch panel as an inputting means of a mobile phone [col. 3 lines 20-23].

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the pointing device of Koziuk as modified by Ryan as an inputting means of a mobile phone, as taught by Sokoloff, in order to provide a mobile phone including a pointing device which has a power management system.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 20, 2007

- s.m.

  
**SUMATI LEFKOWITZ**  
**SUPERVISORY PATENT EXAMINER**